The Role of Technology in Patient Experience: Insights and Trends

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THE BERYL INSTITUTE
Improving the Patient Experience
The Beryl Institute is the global community of practice dedicated to improving the patient experience through collaboration and shared knowledge. We define the patient experience as the sum of all interactions, shaped by an organization’s culture, that influence patient perceptions across the continuum of care.

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A New View on Technology and the Patient Experience

The topic of technology and patient experience is not a new one, but perhaps over the length of its existence its focus has been skewed. In the operational mindset that drives much of how we manage healthcare and the decisions made, transactions and their cost implications reign the day. Yet in a healthcare system increasingly focused on the consumer at its center – the very patients, families, caregiver networks and communities served – that conversation is being forced to curve, stretch and bend. What once was purely about transactions is now and should remain focused on interactions.

The primary purpose of this paper is not to identify or assess specific technologies regarding their application to the healthcare experience. Rather it is to understand, from a broad range of perspectives, why and how technology can continue to play a vital role in addressing and impacting patient experience overall.

Our intention through this work is to represent the vast range of perspectives influencing or being touched by technology decisions and to understand the very motivations, implications and considerations to what technology in healthcare is, can and should be today and into the future. Our hope is that by bringing these varied voices together we can begin to paint a much needed multi-dimensional view on the topic, while finding a very evident common ground on both criticality, focus and trends overall.

In this paper we have included the voices of those providing care via Chief Information or Technology Officers – those shaping technology strategy – and Chief Experience Officers – those enacting experience strategy and driving to sustain positive outcomes. We also have included the voices of innovation, represented in a sample of executive leaders from leading technology related firms who are living at the cutting edges of the technology and experience dialogue. The final voices are unquestionably central to this overall dialogue. In inviting the voices of patients and family members to share their own perspectives and insights, we reinforce from the start that the technology we choose is only as valuable as how it engages or impacts those it touches.

As we engage in the words of our contributors to follow, this is not a conversation on technology use, but rather the implications of our technology choices. This is a different paper than most from the standpoint that it’s not just about technology itself. Rather it explores the broader influence of technology on experience and the considerations we have in the rapidly developing world that envelopes us in healthcare.

The story that emerges to follow is one about a complex simplicity that we are urged to consider. There is little question that the implications of a consumer driven healthcare marketplace will be significant for the industry. There is also strong alignment that in the face of technological advances in healthcare, and the innovations that emerge daily, that healthcare itself remains slow to move and even lagging in action to adopt to a new level of expectations that expands daily.

The ultimate reality perhaps in this conversation is the powerful simplicity that seems to continue to hold the center of the patient experience conversation. The bottom line is that our efforts to provide the best in experience must be technologically driven, and that in a new healthcare world, technology does not equate to complexity, but rather accessibility, immediacy, choice, well-being, sustainability and ultimately viability.

As we will see through the words of our contributors, which reflect a much broader conversation now underway, we only have but one choice: to push forward. The opportunity for healthcare organizations is now to make thoughtful and informed choices as they look to provide the best in experience for those they care for and serve. And technology, in how it’s used, not what is implemented, will into the unforeseeable future play a critical role in the overall patient experience.

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**Framing Our Inquiry**

As in many of our works, we look to bring the voices of experts in from where the work is happening. This led to a strong and broad panel of contributors representing the voices from the various corners of healthcare influencing or being influenced by technology. The contributors comprised thirteen individuals from provider organizations, technology resource providers and included patients and family perspective (see full list of contributors on page 21).

Through a series of interviews around six core questions, perspectives were gathered, stories were shared and themes were identified. Each contributor was asked to address the following:

- What are the most significant patient experience related technologies that exist today?
- What do you believe are the greatest technology needs to positively impact the patient experience?
- In which areas of the patient experience can technology have the greatest impact?
- What do you see as the value in investing in patient experience related technology - e.g. ROI, outcomes, loyalty, etc.?
- What will be the greatest technology trends in healthcare over the next 5 years? And which will be most relevant to patient experience?
- What would you offer as the critical guiding principles to engage/introducing technology in improving patient experience?

While the responses came from various voices and multiple perspectives, there was an emerging commonality we could not have anticipated and an identification of trends that perhaps we could. In the pages that follow we will share thematic highlights around these six major questions, but believe we are best served by the voices of our contributors themselves. It is in their reflections, insights and shared wisdom that we will not only begin to see a shared picture of how technology can and does positively impact the patient experience, we also will find a common call to action with key considerations in how we begin to look at technology as an integrative solution in our efforts versus a distinct effort disconnected from our broader organizational strategy.

As we share the themes that emerged, we urge you to look for your own takeaways. What will support your organizational efforts, what will inform your considerations and what will guide your future decisions? As we look at continued efforts to improve the patient experience, there are not many issues and opportunities that has as a significant and far reaching influence on our ability to deliver on our hope, intentions and promises. Technology and patient experience are and will forever be intertwined, not in leading to an impersonal environment of care, but rather, and quite paradoxically, it may become the means by which we create the most personal, intimate, focused and forward looking encounter we can in healthcare.
A Patchwork of Perspectives and a Common Theme

In each of the sections to follow we will provide the question and some general themes we heard in our conversations across contributors. As already noted in exploring this topic we believe the voices of those creating, evaluating, implementing or being impacted by technology all had a valuable perspective to offer. With that, the direct words of our contributors comprise each section as well. It is in the essence of their words that you can sense and engage yourselves in the palpability of this issue, the challenges it presents and the opportunities is unveils. We will return in our conclusion to explore the common themes and the call to action that emerges from our contributors’ words. The insights of the individuals we engaged follow.

What are the most significant patient experience related technologies that exist today?

We opened our inquiry by setting the foundation on which patient experience related technology is currently playing a role. There was some variation in response, but a few central ideas emerged. It is clear that whether for the good or bad, electronic medical/health records (EHR) at least were intended to provide more connected opportunity to engage patients. I think we find most comments here and stories from experience reveal that in many cases EHRs still do not serve the needs of the end users as much as they benefit (to the extent they can) the processes of the providers themselves.

This puts this specific technology in a precarious place in the patient experience conversation and has many working to rectify intention versus reality. Additionally the cost, cumbersome nature and implementation challenges experienced in many EHR efforts as well as its identification in some literature as a source of stress versus process efficiency provides a great opening for contributed improvement.

These improvements were captured by our contributors in other items they identified. The idea of mobile technology and mobility first emerged in our current state conversation, with a caveat, that it is in the very early edges of its applicability in healthcare compared to other industries. Yet with this identification of mobility one underlying theme that was revealed was that of general connectivity. The fact is access to and availability of information is significantly greater and the ability to communicate virtually is expanding. This provides both a new spin on what patient experience means as individuals come armed with information and often a network of connections who may be very well traveling the same health path.

We also saw the initial identification of the foundational technologies in experience from interactive technology to patient portals and even growing access to big data to make more robust decisions all playing a fundamental role today. Yet in every instance it was also noted we had much more to do in each of these areas reinforcing the general perspective that healthcare still has steps to take in catching up to its peers industries in effective technology use, especially with its consumer facing efforts.

Some of the key thoughts from our contributors included:

I think that patients having more access to their information is critically important. Its prevalence has exploded in the last few years, nicely following the trend of the deployment of electronic health records. We now see that patients have the opportunity to see their health information through the internet via web portals, with some health centers giving patients access to their physician notes in real time, referred to as “Open Notes.” Overall, the availability of health information available to the patient in near to real time is really key for patients to be able to play a more active role in their health. As we continue to digitize medicine, it will allow patients to have increased access to their information unlike they’ve had before.

- Michael Pfeffer

I look at mobility, for the advent of mobile healthcare application. Second, video technology, especially in the case of healthcare right now with telemedicine, allowing for that true video interaction and remote ability to interact, diagnose, and treat patients from across the world and involve patients into a realm that they want to be and expect to be dealt with. Next, I would also say that interactive technologies, within the patient domain; within the rooms within the hospital. Last but not least, this goes without saying, I think that ubiquitous broadband access, things such as Wi-Fi access everywhere, are just going to further along the patient experience so that they can receive the quality outcomes in healthcare that they, quite frankly, demand and deserve.

- Aaron Miri

Every day we’re seeing more, and varied, advances in technology that affect the way patients and families manage their health. I think there are something like 167,000 iPhone apps, and most healthcare providers have created, or are in the process of creating, a patient portal to communicate with their customers. And interactive patient systems that combine technologies such as these empower patients with educational tools in acute care settings or outpatient
clinics or even at home on their smartphones. That’s the dynamic ecosystem I see when I look at the healthcare environment today.

- Michael O’Neil

When I think about technology and patient experience, I put this into two categories. One would be technologies that are directly accessed by those that we serve - this may be a healthcare consumer who is seeking care, or a patient who is receiving care within our organization. The ultimate goal would be that we use technology in innovative ways to further engage patients and families in their health outcomes and care. This can range from our websites and social media to interactive technologies that we use at the inpatient bedside to educate patients on their health condition and care.

The second category for technology would be methods that we use within our own team to better enable us to be very effective with our evidence based practices that provide for exceptional outcomes and patient experience. An obvious example would be our electronic medical records system. Other examples would include the technology platform with our survey vendor partner that allows us to synthesize all patient experience survey results into meaningful information to help us understand the voice of the patient and family, and best meet their needs. And yet another example within patient experience would be iPad based tools that allow us to track and leverage feedback directly from our patients at the bedside. Twenty-five of our campuses are currently using such a tool during purposeful leader rounding, capturing information directly from patients and families for follow-up. This follow-up may be recognition for front line employees to further promote excellence, or issue resolution to improve our patient’s experience.

- Pam Guler

Well, I think the most significant technologies are the same ones that you’ll hear from everyone else, and they’ve been created a long time ago and we’re just now doing what’s necessary to connect those technologies and transform it to actually utilize and actually benefit the patient - that’s really what’s happening right now. We’ve had electronic medical records and getting them all finally wired up. We’ve had smart phones and we’re getting them all wired up, and we’ve had big databases, algorithms, technologies and artificial intelligence. We’ve had all of this for a while. But connecting those in a framework and technology ecosystem, and then creating the path to actually benefit the patient, put that power in both the patient and the provider’s hands, is the transformational experience over the next ten years for our health system as a whole.

- Paul Alexander Clark

I think a lot about the gap actually. I see a lot of technologies out there and am often weary of what value they actually deliver to our customers, to our patients. When I think of how I go about my day, especially as a heavy user of my iPhone. I look at the mobile technologies that I use that have completely displaced what I used to do. Think about it; banking, airlines, finding directions, my social life, dining out, looking up reviews, all those things are available to me on my iPhone, and I use them constantly. Then I think about what we have as an equivalent in healthcare and I talk broadly; we just don’t have it. We need to catch up.

- Sven Gierlinger

Something that I think is going to radically change the way health systems providers, nurses, and ultimately patients engage in healthcare process is deep machine learning or cognitive computing using natural language processing. Today the amount of data that is out there and available essentially breaks these systems. They can’t keep up, so when we talk about cognitive computing in healthcare, it’s about providers and systems being able to find new insights, locked away into all the data that’s out there by mirroring some human elements.

- Gautam Mahtani

The fact that patients are connecting with patients has actually completely changed the way that healthcare professionals think about healthcare. And while social and technology platforms will come and go, and their purposes or how they actually function, will shift, what has really changed is the fact that we can converse using the social web. It’s the connectivity that is the technological part that is, for me, the one that has had the impact. It’s taking away that terminal illness of isolation, it’s bringing people together so that they know that they’re not as singular as they may have felt. It helps them prepare for consults with their healthcare providers. It helps them be partners in their care.

- Colleen Young

Information Democratization is another concept to consider in contemplating the role of technology in healthcare. The internet, as a ubiquitous source
of health care information is narrowing the gap between providers and consumers of healthcare who have personal, physical and financial motivations to understand all aspects of their health challenge as well as proven and unproven treatment options.

- Tim Travis

I think many believe that there is a silver bullet of technology that’s really going to drive and positively impact patient engagement. Despite the cynics and that challenges implementing EHRs, I see the EHR as having the building blocks of how technology can engage the patient. Because the HER is such a robust, helping improve the patient experience because the EHR is such a robust enterprise tool. The challenge now is how do we take this huge monster of a tool and actually get it to engage with patients? Not just providing it as clinical tool with patient information and analytics but as an information system for patients and to really use it to improve patient engagement scores and clinical outcomes. Making the tool more patient centric through interactive solutions can do just that.

- Matthew Werder

What do you believe are the greatest technology needs to positively impact the patient experience?

We next turned the conversation from existing technology to the needs critical to positively impacting patient experience. Rather than a completely new list of ideas, what we saw was significant continuity of thought. The very needs identified build on what we were doing, but called for a stretching and strengthening of capacity, a broadening of thinking and a more defined intent.

Again the idea of accessibility via patient portals emerged, but now in reinforcing that their presence is not enough. They must find new ways to engage, provide information and create linkages to the overall healthcare experience. A similar challenge was posed in looking at the EMR. While they had good intentions of creating accessibility, the reality is that they most often contribute to serving the operational needs of organizations rather than the needs of those being served. As one contributor noted they are still “not patient friendly.”

This reinforced a topic found in almost every health IT conversation today – interoperability. While an insiders word in use, it is truly the desire of the end user in practice. Yet it was acknowledged in as much as the concept is fundamental, the efforts in place due to competing platforms and even market competition have been implicit and not so implicit barriers to success. As one contributor noted, it may take the consumers call for this information and the choices they make if they don’t have it to drive lasting outcomes across the industry here. [Authors note: It should be noted that at the time of production, US Health and Human Services Secretary Sylvia Burwell announced at the HIMSS 2016 Conference that, “Companies that provide 90 percent of electronic health records used by hospitals nationwide as well as the top five largest private healthcare systems in the country have agreed to implement three core commitments [to address interoperability].” This is a significant action in the face of the challenges our contributors acknowledged existed today.

From these internal facing perspectives, the idea was surfaced on multiple occasions that we must be looking outcome of the healthcare industry for that which will drive our opportunities for success. In various ways throughout our interviews we heard how come I can do “X” with one industry, but can’t do that for healthcare? This covered issues from reservations and information gathering to pricing and other potential interactions. The thought being that in the consumer-facing industry that healthcare is becoming, there remains much to be learned from the consumer-facing world.

From the internal concept of interoperability to the call for external perspective the conversations also raised the issue of integration. How were efforts linked from internal organizational technologies to the blossoming wealth of health related apps in existence? The point being the need wasn’t more technology in so much as it was technology that was integrated, that allowed people to have better understand, make better decisions, engage more effectively in their care and support others in doing so. This idea of ownership of care in the hands of the patient is significant and growing in a world in which technology and its breadth of resources will become the true driver.

That led us to the foundational point raised by so many. At the end of the day are we developing technologies to address what patients are looking for? If we are to truly address the opportunity for technology within the growing

In the consumer-facing industry that healthcare is becoming, there remains much to be learned from the consumer-facing world.
experience mindset in healthcare, than that question cannot be overlooked. In fact it may very well need to be (and should be) at the heart of any strategy for both existing and emerging technologies. This is not to say that every technology will be patient facing or touch patients directly; some truly are process based and focus on operational efficiencies. But even in those instances if the practicality of the improvements made don’t lead with a larger intent, the ultimate outcomes we seek to achieve may not be realized.

Some of the key thoughts from our contributors included:

My sense about technology and whether it’s engagement or system improvement or anything in this zone, I think that the change is going to come from outside the healthcare industry. The solutions are going to be delivered by companies or entities that have a history of putting technology in the hands of consumers, people, and having those consumers, people, say “awesome!” and just start using it.

- Casey Quinlan

We’ve got to catch up. We are ten years behind the other industries. That plays out, I think, especially when comparing the convenience of my healthcare experience with the convenience I experience in other areas of my daily life; technology has really disrupted all of these industries, and in the process, made our day-to-day lives more convenient. And we think that healthcare is being so disrupted, but I don’t think that we are adjusting to that fast enough. I think healthcare technology is also fragmented; there is an app for this, a solution for that, but it’s not connected. I think over the next five years all these different solutions have to be connected.

- Sven Gierlinger

It’s really going to take some learning from other industries and some true real innovation because up until now we really haven’t innovated in healthcare. Innovation is when you actually apply a new technology. We’ve installed the EMR, now we’ve got to create applications to use that and it really is a critical juncture. We’re finally starting to connect the dots that when you have a better patient experience, you’re more likely to follow the appropriate therapy and health guidelines, you’re more likely to take better care of yourself, you’re more likely to be actually able to be healed, and so you’re going to cost the payers less money. This is the critical juncture where we’re deciding, are we going to create an information technology infrastructure that is centered on the patient? What’s our connected healthcare technology ecosystem going to look like?

Are we going to be patient-centered, are we going to create applications that help and support the patient experience, or are we going to focus on squeezing another one half of one percent out of our revenue cycle?

- Paul Alexander Clark

For us to be able to use it at the point of care, we have to have a platform that allows for patients engagement that CIOs can be comfortable installing. We have privacy concerns that need to be incorporated. And then we know that the consumer’s technology is much more comfortable in apps, if you so call it, outside where they’re much more willing to disclose information that we would on an inpatient side or outpatient side where we have more scrutiny over what information can be shared.

- Jolinda Lambert

I think the thing that is going to change the whole world in this area is for patients to be able to self-monitor. I think that if patients can get a greater sense of control - this really is my whole thing about the patient experience - is the decision making and the power being with the patient.

- David Festenstein

We don’t always need to create new technologies. Sometimes we just need to connect the most innovative, effective solutions and let them work together in ways that haven’t been possible before to change the way we deliver care. For example, EHRs contain a wealth of powerful clinical data. A claims database may contain valuable pharmaceutical and drug interaction information. Combine that knowledge with a mobile app on a patient’s phone or some other kind of telehealth technology that connects patients and providers synchronously or asynchronously and, suddenly, those three or four existing technologies are now working in sync to help a person manage his or her condition, adopt healthier behaviors and stay out of the hospital. That’s how you can really begin to have an impact.

- Michael O’Neil

I believe that the virtual entry-points right now for systems, again back to patient portals, are very much lacking. Number two, this is a general feeling across healthcare, especially my particular experience, and electronic medical records in general are not patient friendly. In fact, they’re designed for maximizing the amount of data and patient information to make a clinical determination, versus allowing for the patient
to become truly part of their own care plan. Last, but not least, is standards in their interoperability, including that ease of access. I think it’s going to take organizations that are succeeding to prove the value of putting the patient and the patient information first, and thus the overall patient experience, as the primary factor to drive this along.

- Aaron Miri

I think that there is a lot of opportunity for technology to help people in the self-care management of chronic disease, but also, for acute care situations where there might be higher touch needs. I’m thinking pre or post-surgical care. There are a lot of things that can be done where technology can enable the patient can stay home. For example sending daily pictures of the surgical area, allowing the physician to see the beginning of infection happening before the customary follow up appointment and say, “You should get in here now.” What a benefit to have that type of connectivity.

- Colleen Young

I don’t think we need to invent anything really new. We could imitate something that already exist, right? If you’re looking at some of these patient facing technologies, I fear we are not keeping the patient front and center or what they are our patient’s really want. What do patients want, what won’t they like about healthcare today and how can technology actually solve that? I think some of the communication has been improved now with patient portals. You can email your provider directly and get a response from him or from their nurse in a timely fashion. I think some of these could begin to differentiate some providers from another if they can really keep the patient front and center when they’re developing these applications.

- Matthew Werder

There is a technology Darwinism emerging in which it seems “only the fittest will survive.” “Fittest” is defined by the leading ability to improve the lives of all healthcare stakeholders.

- Tim Travis

A great need is to continue our focus on reaching our communities outside of the four walls of the hospital as well, caring for the whole person throughout the course of their lives, and engaging in a relationship with the communities that we serve. This is a focus of our organization.

- Pam Guler

We’ve seen a significant amount of patients sign up and use our electronic web portal, which we call MyUCLAHealth. Patients of all ages, whether they require medical care frequently or intermittently, are taking advantage of this technology. I think the adoption of this technology by patients has been fairly rapid, considering technology adoption rates in general. I think that’s because we’re not using any new technologies—the internet is clearly a very familiar technology so providing patients access to their health information through the internet is just a new way of enabling this technology.

- Michael Pfeffer

In which areas of the patient experience can technology have the greatest impact?

In replying to this question on impact, our contributors truly moved from a conversation on tactical elements or focal points to the broader implications for positive action. In the richness of responses, three significant concepts emerged.

The first set of ideas was less about where in the process to what overall would be impacted. There is an emerging awareness and recognition – one we have espoused for some while via The Beryl Institute – that experience itself is the embodiment of quality, safety and service (satisfaction) encounters combined and is influenced as well by cost and by choices driven by the broader outcomes we see in our communities and in society in general. The acknowledgement here by contributors is that while it may not be there yet, technology in its ideal state is at the core of driving the best in outcomes. This shapes a powerful call to action that technology is no longer just a tool, but a central strategic component of overall healthcare success.

This was followed by the concept that we must accept that technology itself cannot only be focused on outcomes or those being served. It too must provide more effective and efficient interactions and opportunities for those providing care across the continuum as well. In creating an infrastructure that can return those that chose the business of caring to the practice of actual caring versus being mired in the policy and procedural hurdles that so often occupy healthcare work streams today, we create a space for greater engagement and outcomes as well.

Lastly, at the foundation of this question and the opportunity it seeks to address was a consistent set of responses taking us back the fundamental idea that technology can and much be used to effectively and simply to engage people in their care. This
included four major themes I found to be central to this type of intention and the opportunity for success it represents. First, convenience; technology must make the system more accessible, simpler to navigate, easier to understand. Second, comprehensive; technology cannot selectively address some areas of the continuum providing gaps in which people can find themselves stuck or lost. This will require a broader industry effort, from peer organizations and competitors alike to align around a common commitment to this need.

Third, practical; this may build on convenience, but more so underscores that need to ensure people know how to use it intuitively. The most impactful (and popular) technological advances today are not those so complex they require expertise or extensive instructions. Rather they are intuitive, and as a result broadly accessible to those it touches.

Lastly, personalized; with great consistency the idea of personalizing the care experience was perhaps the most noted opportunity. Technology is the means by which this now becomes possible, from the issues we addressed above of integrated and interoperable systems we have the ability to engage in big data ideas, create collective and even intelligent technologies that begin to meet the ability to engage in big data ideas, create collective above of integrated and interoperable systems we have now becomes possible, from the issues we addressed.

In these four ideas, I felt we had arrived at a balance of the practically philosophical intention and opportunity for technology and patient experience. In providing for these four cornerstones of engagement in healthcare, the experience of those in the system can be nothing but positively impacted.

Some of the key thoughts from our contributors included:

We are looking at the simplest and most basic technologies. Whatever can help me navigate the system better, from the patient perspective, is really important. The other thing you hear when you talk to nurses and specialty physicians is how things like the electronic medical record, or other technology, actually creates a barrier to having a great patient experience. If you ask a nurse why, he/she will tell you, 'I want to provide a great experience, great service but how I deliver care has completely changed. I spend so much time documenting, so much time on a computer, that I am not able to do that.' How can we transform that, how can we use technology to make it easier from the caregiver perspective as well as the patient side; we need to be very sensitive to the caregiver side through things like voice technology and all other kinds of things that will free up time for them to actually give better care at the bedside, or in the exam room, or wherever they are at in the continuum of care.

- Sven Gierlinger

If I think about it, I say from the very beginning, from patient choice. Not only an economic choice, but also a quality choice, right from the go. That visibility is clearly going to have a difference. Then if one can truly understand that patient’s journey through discharge and beyond, and get higher visibility. I think that’s getting way more sophisticated, and I think that’s across the continuum, but we’re also using that data to figure out which pieces are really important to the patient. Like I always say, patients saying this part of the journey was not so great versus them saying, “This part of the journey was not so great and I think you really need to do something about it” are two totally different things. I think it helps to then get to which touch points are critical, so from choice to engagement to understand unprecedented access to a patient.

- Gautam Mahtani

Information Democratization is another concept to consider in contemplating the role of technology in healthcare. The internet, as a ubiquitous source of healthcare information is narrowing the gap between providers and consumers of healthcare who have personal, physical and financial motivations to understand all aspects of their health challenge as well as proven and unproven treatment options.

In addition to driving the democratization of information, technology supports the democratization of healthcare access. There are many people who don’t have access to adequate healthcare in the United States and across the globe. Telemedicine, including remote access to software-based diagnostic tools, low-level providers, remote monitoring and even access to specialists, can have a far-ranging impact. Considering the variables of patient experience to include care quality, safety, satisfaction, and increasingly, cost, those technologies and their application will be game changers in the years to come.

- Tim Travis

I wrote a post back in 2010 for Disruptive Women in Healthcare, “All I Want for Christmas is Customer Service at My Doctor’s Office.” It outlined a very simple and totally doable process, with current technology, of making an appointment to see my primary care physician and then going to that appointment and having all of that happen. It was
all technology assisted human interaction. I don’t understand why I can’t log on in one place to do anything I need to do with my healthcare. Now, insurers/payers are [trying to] approach this. It’s possible to maybe do a little bit of this kind of stuff around the edges, using payer stuff online, but even then, it’s still like you have to spend a lot of time figuring out the system. There’s no “quick” about it. I would love to be able to log in in one place anytime and both make an appointment, see my history, send a document or whatever to a provider or to a family member or to whomever I chose and also see all of the stuff going on in my records to make sure that there wasn’t something that was happening that wasn’t really me.

- Casey Quinlan

I think the answer depends on the patient and their needs. If you have a hospitalized patient, they want to know what their doctor looks like and who is on their care team. Using tablets or interactive television technologies, patients will be able to see who is on their care team on any given day. This is a key patient satisfier and I think allows for improved patient-care team interactions. Ambulatory patients want to be able to make appointments via a web portal, or be notified that a canceled appointment has occurred allowing for an earlier appointment day. All of these features are being rolled out at UCLA Health.

If the patient is on a ventilator and cannot access a tablet for their health information, then perhaps their family would like to be able to access their key health information while in the hospital. These are some of the things we’re working on and are in pilot phase at UCLA Health. It really depends on the patient’s (or family’s) needs to determine what kind of technology is going to be the most important for them. When you are resource constrained, as every single health system is, you really want to use those resources to put in place technologies that are going to benefit the most people first, and then work your way down from that.

- Michael Pfeffer

I think it’s two-fold, technology needs to provide a means for adapting to patients needs and what they can understand and adhere to.

- Jolinda Lambert

Outcomes and quality. Technology must be the enabler for good process and good people. Therefore, when it comes to patient experience we have to tie it back to that return on value proposition, which is top quality, top clinical outcomes and overall patient experience. Healthcare is tied too much into reimbursement models and not really focusing on what’s right for the patient. As I have often stated, “When is meaningful use going to be more meaningful experience?”

- Aaron Miri

The key to an effective, productive digital user experience is that it must be supported by empirical evidence, research and, of course, it must be easy to use and engage with. Next, multiple HIT systems need to be completely interoperable so you can leverage the right data and create a personalized experience that’s relevant to that patient and his or her care plan. The convergence of existing technologies can have a major impact on healthcare.

- Michael O’Neil

There isn’t the one size fits all here. There’s going to be niche technologies that’s going to support a variety of patients populations for certain and specific needs. Trying to put out a big robust enterprise wide system and trying to capture as many pieces as you can probably isn’t the most appropriate way of going about it but I think some of these patient portals that really focus on some of the chronic diseases that individuals have had good success, such as diabetes or congestive heart failure.

There’s some really good areas where we could, whether our application technology that 1, educates a patient but also opens up to a whole network and community of others that have similar challenges and have gone through that. Those type of collective type of technologies are really good. I think any way that we can educate patients and just get a bit more value out of the technology would be helpful and to some degree, it’s personalizing the engagement, right?

- Matthew Werder
What do you see as the value in investing in patient experience related technology?

Our contributors brought an interesting collection of perspectives to this question, but all around themes central to what will lead to lasting, vibrant and strong healthcare organizations. We explore these ideas in three major thematic frames.

First, brand loyalty or patient choices reinforced that technology, if it follows and acts on all we have discussed before, will not only provide the opportunity for patient choice and honor it, it will also be the backbone on which loyalty can be established and sustained.

Second, was even more direct in the recognition that our healthcare systems globally, especially in the state of U.S. healthcare policy, are being driven by performance incentives tied to real dollars. While perhaps not a big enough motivator for some in its direct dollar impact, the broader ripple effect on the revenue side of healthcare today is becoming more palpable every day. From what once was a question on whether we should, more are now looking at the broader numbers and declaring how can we not?

Third, this investment provides one of the most robust opportunities to focus on and drive continuous improvement. In a consumer driven healthcare marketplace, the ability to get better after each encounter to show both a personal and collective intelligence will be critical. As consumers are savvier, not just on their personal cases, but also on the system itself, those in healthcare must be committed to a tireless pursuit of improvement. Technology not only enables this, it reinforces its worth based on much of what we discovered in previous questions. If done right this investment reaps great potential benefit and perhaps even rewards yet unseen.

Some of the key thoughts from our contributors included:

To us the ultimate impact is that innovative and effective use of technology enables us to better fulfill our mission.

One challenge that I face as a Chief Patient Experience Officer is the sheer volume of technology offerings to help address the patient experience best practices (such as purposeful rounding, patient education, etc). Our field has expanded, and with that expansion comes evolving technologies to meet our needs from many vendor partners. To address this challenge I find that it is most helpful to focus on our best practice strategies first, and engage technology where appropriate, while continuing to monitor and consider new ideas on the market. First and foremost, before you think about technology, determine your best practice strategy for improving the patient experience. What do you need to do culturally? What do you need to do operationally? We have developed a strategy framework that is evidence based, and that we know drives improvement in patient experience. Everything within that strategy drives better engagement and communication with our patients and their families. Once you have your strategy, build from that, looking to technologies that can help you execute your best practices effectively.

- Pam Guler

The thing is that people want to know. They want to know things. They want to feel empowered. They want to feel like they’re participating in their lives. Do whatever you have to do to make that happen.

- Casey Quinlan

We come from a place of relationship building or loyalty with patients and the teams that care for them, so for us “loyalty”, a term that is over used in many ways is a behavior. There are essentially four loyalty behaviors that drive the patient relationship and the organization forward. One, it a patient has the same or similar need again; they will choose the same provider. Number two, when the patient has other needs, they’re thinking of the same provider and go back to them. Number three, the willingness of the patient to speak positively about their provider to friends, family, online or whatever it is. Then the final behavior is the willingness of the patient to give the provider their most precious asset, which is their time, their willingness to actually engage with them in feedback and a dialogue. This is because they believe the relation, that it is truly a relationship and not a transaction. I think we come from the loyalty place, but we know that’s tied to clinical outcomes. If there’s better communication in relationship, there are better outcomes. And it ties to better economic outcomes for the organization that drive it forward.

- Gautam Mahtani

By really focusing on the quality and the outcomes, it shows brand loyalty. The patients that elect to come to you and elect to use your facilities will come back because suddenly you are beyond top box. Now, you truly have created patient advocates and consumer advocates for your organization. There is something to be said for focusing, again, on quality and focusing truly on that patient experience.

- Aaron Miri
The role of technology in patient experience is crucial in advancing adoption of, and gaining benefits from technology. It is a critical aspect in educating, engaging and giving voice to the patient. Technology should be designed to enhance the patient experience. The patient experience should not be sacrificed to advance technology.

There’s a direct answer to that. There are clearly ways to define what we do in highly financial terms. As organizations form ACO’s or ACA’s, they’re seeking to attract and retain numbers, reputation, as well as things as simple as the star rating through CMS. As patients become more involved consumers in healthcare, improved patient experience will have an increasing impact on revenue.

- Tim Travis

One of the things that I would suggest returns a lot of value of understanding the patient experience is online communities. Building those communities, listening to those communities, and looking at what the patient experience is in order to improve it. I think healthcare institutions can invest a lot more in listening and participating in online patient conversations, so they can get outside of their property, physically and virtually.

- Colleen Young

We’re looking at processes that are cumbersome, especially for patients, and applying technologies to simplify those processes. I think that ultimately, when we choose to implement a technology, we’re looking to see if it has a net positive impact on a problem that we have identified, rather than simply implementing a technology and hoping it solves an unknown problem.

- Michael Pfeffer

What will be the greatest technology trends in healthcare over the next 5 years? And which will be most relevant to patient experience?

The question on trends continued to expand on the previous conversations, but lead us to more tangible constructs as well. The insights of our contributors across representative roles came back to some very central and consistent themes.

First, there is a common recognition that we are at the starting edge of true mobile technology. Mobility provides us new ways to engage people, communicate, provide information and learning, engage in direct interaction and more. This mobile world is also driving the explosion of apps that are focused on simplifying work streams, connecting people to care pathways, providing insights into recovery journeys, creating linkages to communities of shared experience, etc., all of which will play a role in healthcare in ways they never could before simply because of this broader connectivity. As one contributor suggested, “Ironically, the smartphone has become almost an integral part of our body.”
Second, through a variation of words came the growing use of telemedicine. Virtual visits or care-on-demand will shift from the fringes of care to main streams of delivery. The speed of this transition will be somewhat influenced by payment policy, but its needs and use may also very well drive a rapid review and realignment of payment policy which could dramatically increase the pace in which this type of technology could be implemented. This would also significantly shift the traditional relationship found at the core of the historic healthcare process.

In addition we will see more focused efforts in technologies committed to access, or even virtual access as noted above. We will also see this on the issue of coordination of care, i.e. not only across the continuum but also truly connecting people to their care teams as well. This will fundamentally shift how we communicate in healthcare overall with proactive notifications, the influence of wearable devices (e.g., Fitbit and others) that not only hold people personally accountable, but also connect the information to providers or even larger systems providing for more significant data analytics, predictive modeling and the identification of health trends.

As one contributor offered, success here in identifying future looking trends will rely heavily on a commitment to interoperability. The connection of data and the impact it can have only works if people are willing to play. This also calls for one more critical consideration that many contributors believed would drive technology and healthcare in general in the years ahead and that as one contributor offered would require strong technology efforts. As we design the systems and process for the years ahead we must engage the patient at the center, no matter where they ultimately choose to seek their care.

This was a profound statement for in many of the comments provided allusions to what one contributor called the “democratization of healthcare” were present. We would simply suggest this is what has and will continue to rest at the heart of patient experience from its roots; the power of choice, the implication of those choices and an acknowledgement of how those choices will guide us forward into the years ahead.

Some of the key thoughts from our contributors included:

I think as we get better at strategizing and sharing data across different systems that is going to make the patient a lot more portable and easy to move across different healthcare systems so the possibility that you can move your entire medical record somewhere else could really be disruptive.

You’ll see in a lot of technologies that patient engagement, such as the ability to schedule or confirm your appointments, is becoming pretty common and widely accepted technology to be able to communicate with your provider or any doctor for that matter. In addition patients will be getting information and education pushed to them through either a patient portal, mobile app, or even just through email. Then include telemedicine, which has been slow to adopt because of the reimbursement challenges, and is now changing because the revenue stream will allow us to make the necessary technology investments. As we get better using the EHR, I think we’re going to see a lot more things come out from that in the near future.

- Matthew Werder

We will have systems and tools that will help people and their healthcare clinical teams, healthcare providers, pick one, actually talk to each other and work together. I’m aiming small here. In 5 years I think that we may get there. However, I think that there are a lot of forces aligned against this. I hear from healthcare executives that one of the reasons that they have not been in any hurry around data and records is that why should I make it easy for somebody to go down the street to my competition. This is the thinking that has to change. Until that thinking changes, we will have no change.

- Casey Quinlan

You’d like to see the entire medical community focus on the making the patient the center of what we do, and thus, allow the patient to be the center of our entire health IT infrastructure. One of the most critical pieces for this to happen is better interoperability. We need to achieve a level of interoperability such that all of a patient’s health information is available to the patient and their care providers no matter where they go for care. And so in designing health IT systems, whether they are patient-facing applications, electronic health records, insurance products, whatever, they need be designed with the patient at the center and interoperability and its heart.

- Michael Pfeffer

I see three incredibly important issues facing healthcare today. The first is mobility. Mobile is everywhere and lets us reach patients at any point of care. The second is telehealth. When we combine mobile technologies with telehealth we can create very intimate, powerful and efficient connections between providers and patients to help them stay engaged in their plan of care. And the third is data analytics. Historically, healthcare data has been
clinical and claims-focused. Now imagine adding patient data, or a patient engagement index, to measure a person’s capacity to engage effectively in their care, partner with their care providers and support healthier outcomes.

- **Michael O’Neil**

I would like to see more investment that doesn’t require the patient to always come to the doctor, or to the healthcare institution. I’d like to see more virtual visits, virtual care. I’d love to see a pay structure that compensates the type of check-ins and consults that don’t require patients to come and sit in a waiting room for long periods of time.

- **Colleen Young**

How do we use technology to address ease of access, making appointments the way I want to make them, as hassle free as possible. How do we reduce or eliminate wait times, especially in the outpatient or inpatient setting? Also, what about care coordination? How do we make it so that, as a patient, I really know what everybody else knows, what my schedule is, and how all of that connects. On the telemedicine side, can I connect with somebody else right away without having to make an appointment? On the wellness side, self-diagnosis will emerge. I think that the future is in mobile technology; how can I use this powerful computer that I have in my pocket for my healthcare purposes and needs?

- **Sven Gierlinger**

I think there’s going to be an expectation that certain types of technology will be given. I always use the analogy of, there used to be a time when having an electric window was an option in your car. And you paid more money for that electric window. At one point it was decided that it was going to become standard, no longer a competitive advantage. And as we look forward we are seeing a lot of apps. I think if we really look at the consumer base right now, it’s really about apps. We have everyday people like you and me making apps, we have big corporations making apps. Everybody’s trying to figure out how to provide data to people. I think what we haven’t figured out, is because we’re all unique, what actual data do we need. Mobile technology is really important. I think we just haven’t figured out what to deliver.

- **Jolinda Lambert**

I think that there will be even more effective technologies that will assist us across the continuum of care, further enhancing the ability to engage our communities so that we’re a partner throughout their lives. When and if they do have a time of need, they know where they can go for the best care and experience. Then during that episode of care, it will be key to continue to use our technology, analytics, and tools, to support providing the best care possible engaging each patient and family during that time and beyond.

- **Pam Guler**

So this is the critical juncture where we’re deciding, are we going to create an information technology infrastructure that is centered on the patient? What’s our connected healthcare technology ecosystem going to look like? Are we going to be patient-centered, are we going to create applications that help and support the patient experience, or are we going to focus on squeezing another one half of one percent out of our revenue cycle? Because that’s what it comes down to. There are all sorts of competing priorities for a limited bandwidth of IT, of talent and infrastructure and organizational capacity to project manage, so are we going to focus on the near-term rewards of doing a little bit more revenue cycle, doing a little bit more operational throughput, doing a little bit more on a project? There’s all sorts of different demands on our time, but are we looking at what’s the long term goal of what’s best for the patient, what’s best for our long term financial and organizational future and how do we create a healthcare ecosystem where future patients are going to want to come here, where the patients we have today are going to want to come back, where we are branded as a caring organization and can deliver that caring experience on any platform whether it’s a hospital, an outpatient surgery, a doctor’s office or, even a telemedicine visit over your iPad or smartphone.

- **Paul Alexander Clark**

I think the apps will. Hearing about different apps that allow patients to engage, particularly those with long-term conditions. I think ironically the smartphone has become almost an integral part of our body anyway, so it’s a natural extension really to who we are for us to be able to monitor or prevent. But also if you link that in with the overall healthcare ecosystem so that that app would have the potential to communicate with a central database, you’ve then got the whole thing around patient data. We can see patient data being managed and sliced and diced effectively to be able to make improvement to the patient experience. Really the impact of technology is this amazing kind of ecosystem which is not only drawing
out the best needs of the patient, but allowing the health providers, the pharmaceutical companies, the technology providers, and all the different stakeholders to be able to make the necessary modifications and developments in order to drive the next future generations of healthcare.

- David Festenstein

Telehealth platforms are critical to the democratization of healthcare access. I imagine we will be seeing much more of that. I look at the evolution of medical and non-medical apps, including medical wearables and how those will evolve in years to come. Fitbit represents one small example of leveraging technology with real-time information to drive behavior change

- Tim Travis

I believe there’s five - pricing transparency with really granular quality transparency attached to it, cognitive computing, proprietary technology platforms around episode management, around validation, claims processing and payment reconciliation, sophisticated patient journey mapping that are giving these 360 views around the patient experience and key touch points. The death of the survey in its most traditional form, and to be replaced with things that are on the terms of the patient, and online. I think that some of the rating sites are getting better and people do want to use them, and they do want to put their experience up there, and they do want to use it to make their decisions.

- Gautam Mahtani

I truly believe in that you’re going to see an emergence of artificial intelligence around predictive modeling. Much like you get the weather forecast for the next seven days. You’re now seeing this advent of big data, as they call it, and the rapid access to data sets to be able to do true predictive. Secondly, I think you’re going to see a whole lot more of the video interpretation, telemedicine type of interactivity. You’re going to be able to have the ability, on-demand, to speak to a provider with no wait. Third I believe you’re going to start seeing more proactive notifications, especially as the payers become more interested in customer service and patient experience and especially if the federal government goes that direction.

- Aaron Miri

What would you offer as the critical guiding principles to engage/introduce technology in improving patient experience?

As we look to guiding principles and some of the concluding reflections that follow, we pick up from the concept of choice noted above. That in addressing the issues raised here or in working to tackle the technology issues of your own facility, organization or system, perhaps the biggest lever is the choice to do so acknowledging the true impact that technology does, can and will have on the experience of all in the healthcare system today. As much as it has impacted us in so many other corners of our lives, it is unavoidable that it will soon dramatically change our experience in healthcare as well.

As we closed our conversations with contributors we asked for their own insights on how to best move forward. Their replies were thoughtful and broad, but when brought together helped provide some important considerations for action. Key ideas included:

- Start with the end in mind – what are you hoping to accomplish?
- Before thinking technology, know what your strategy for patient experience is overall
- In making decisions, seek first to understand – assess, ask all involved, engage those in the process around their needs, desired outcomes, especially patients
- This includes understanding what does and does not already exist
- Engage the right people from patients to clinical to leadership for a stronger decision
- Focus on both value and convenience as you make choices
- Maintain a sense of open mindedness in a space where ideas emerge in every moment
- Remember we are trying to do what is right for one another and especially those we care for and/or serve

The contributors all offered an angle of insights that combined provided a comprehensive perspective in moving forward successful. In their words we found great thoughtfulness on what it will take not only to move forward, but also to move forward successfully.
Some of the key thoughts from our contributors included:

Start with your end goal in mind. If you’re selecting technology to engage patients and families, start by focusing on the outcomes you want to achieve. Next, look for a partner who has deep experience operating successfully in a very complex technological environment, as well as a track record of groundbreaking innovation because the roadmap for patient engagement is still being written. Finally, from a practical standpoint, you need to find a partner with change management expertise who can help you seamlessly and openly integrate your platform with your other HIT systems and applications. When those three things are in place, your ability to transform the care experience increases significantly.

- Michael O’Neil

In considering the role of technology in healthcare, Stephen Covey’s first habit, “Begin with the end in mind,” from his book “The Seven Habits of Highly Effective People” is perhaps relevant. Technology must be viewed not as an end, but as a means to an end. It’s a means to educate, engage and inform patients and providers in their mutual goals of care and recovery.

- Tim Travis

Follow what Stephen Covey said, “Seek first to understand.” Put on the lens of your patient and your customers. Number two, sample, sample, and sample some more. Seek input from all stakeholders. Understand truly what is it that you’re trying to get at. Number three, what are you measuring, what is that ROI? What is that return on value? What do you as an organization want to do? Number four, I tell this all the time to folks, over communicate. Five, actively measure and report, and I always tell people go back to number four, which is over communicate, when in doubt.

- Aaron Miri

Think of what the healthcare industry would put in the hands of your daughter, your mother, your father, your husband - what would you want to put in their hands, in their smartphone or in something that they could use easily in their daily lives that would make a difference in their feeling about their health and their potential for living to the fullest extent possible, whatever their condition? What would you want to put in their hands? Keep it that simple. How could you keep it simple, but keep it scientific and keep it health literate and keep it something that people would look at and go oh, I feel better, because I used that and now I know that the doctor and I have a plan that will work. Healthcare is a hugely complex topic, but what would you want to put in someone’s hand that you love that would make a difference to them and help them live a healthier life? Start there.

- Casey Quinlan

I think it is doing an assessment of what technology they are using and identifying where the gaps are. Do not over complicate things and look for the most amazing solution that will solve everything. The key is integration of the clinical care process between the human element and technology, and looking at that closely. What technology do we already have in place, and is it really helping the patient experience or hindering it? What is the value for the patient? Look at those processes and fine tune them; integrate the training efforts, and standards around that, with what technology actually brings.

- Sven Gierlinger

Find where there are communities of support for the types of patient populations that you serve. Actually recommend, not only, in-person, but virtual support groups. Help patients and family members find that connectivity. Evaluate them, vet them, and prescribe them. Then, go one step beyond that and integrate yourself into those communities. Listen and engage with them there. You can learn a lot that will help you, your institution improve the patient experience. Just simply by asking questions as a integral community member, you can get an awful lot of input and new perspective.

- Colleen Young

I think it’s actually open-mindedness. What we’ve done for the past 20 years, will not be what we do for the next 20 years. There are challenges and it’s easy to say no, but we must understand that your patients don’t care why you say no. They still want what they want. And having a really good sense of what that need is, of what patients are asking for, is where we must be.

- Jolinda Lambert

I think two things. One would be social media, definitely, because it’s there and it’s so cheap since you don’t have to pay for it. You obviously have to pay for people to capture the data and to deal with it, but in essence you don’t have to pay for a massively expensive infrastructure in order to do that. Also the other thing I think is very powerful is video. I think video is phenomenally powerful; using simple
podcasts, podcasts and video, to be able to capture the different patient experiences and particularly those who do very well.

- David Festenstein

There’s one clear one, which is believe in anything that truly empowers teams. It’s about the team first. If it empowers teams to better serve patients then it’s worth exploring. Fight to close that gap between what people want in the board room versus the complete and total disconnect of what people need on the patient facing side to truly do their job. That includes anything that can do that, that can help with quality, that can help with choice, that can help with empowering these teams with data for decision-making. Not making the decision for them, but empowering them, instead of some vast fear of data.

Me must focus on anything that empowers teams to better serve.

- Gautam Mahtani

I think there are three basic principles: First is you have to have clinicians part of your health IT organization—clinicians who still care for patients but also have a significant portion of their time dedicated to information technology. Second, you need to have operations partner on all projects that involve technology. Third, always do what’s right for the patient. Whenever we have a dilemma on which decision to make with technology—a feature to enable, a workflow to modify, a technology to purchase—we always take a step back and say, “What’s the best thing for the patient?” Keeping this principle as your “North Star” when you’re doing technology projects ensures you will be successful. That has been our major guiding principle at UCLA Health.

- Michael Pfeffer

The guiding principle is to transform healthcare delivery into the mantra that every other industry has had to live by, value and convenience. The long gain in this is that the baby boom will absolutely transform healthcare delivery, but at the same time once that big “meal” is over for healthcare providers, the world of healthcare delivery will look dramatically different.

You look at anybody that’s 35 years and younger, and their entire life is on their smart phone. If you are not working right now to create a retail and convenient telemedicine experience, and the infrastructure that’s needed to do that, and doctors and nurses and providers that are familiar with that, you’ll be absolutely left behind. That demand for what’s convenient will absolutely make obsolete the tradition of going to a particular hospital, going to a particular doctor. And so the guiding principle has to be value and convenience for the patient, for the consumer.

- Paul Alexander Clark
Reflections, Recommendations and Conclusion

In summing up the guiding principles above and digging deeper in the richness of recommendations provided by our contributors, we close much where we began. First, that in this exploration to truly provide a multidimensional perspective on technology and patient experience today we did not intend to suggest a specific type of technology but rather uncover the trends we believed central and relevant to positively impacting experience. With that, some clear central themes continued to surface calling us to action and challenging each of us and our organizations as we look to improve the patient experience in an increasing technologically noisy healthcare world.

1. We must not consider a technology without placing the patient and those we serve at the center of the discussion. Not simply as recipients of technological innovations, but as active partners in helping shape what they ultimately look and feel like.

2. We cannot overlook the critical perspectives of our care teams, and must work to include and acknowledge their voices as well. The ability of these individuals to do their work effectively is the foundation on which any improvement is built.

3. The nature of care is changing the relationship structure of healthcare overall. As individuals have broader access to information and connectivity and expanding mobile resources emerge, how people make choices, and on what those choices are based are dramatically different. This changes the power structure in healthcare and therefore shifts the way in which care is provided more significantly. The emergence of bringing care to where people need it – call it virtual visits, telemedicine or something else – is a fundamental shift in the way in which we think about experience traditionally overall.

4. The true essence of patient experience as the sum of all interactions is poised to both influence and be influenced by technology choices. These cannot be made in a vacuum, but rather with intention and thoughtfulness.

5. Technology for the sake of technology to seem cutting edge is a fast track to disaster. In fact this option flies in the face of almost every principle our contributors shared.

6. Patient experience and technology are now inseparable. And in this light we must first work to ensure that our healthcare technologies talk, share, collaborate and drive collective conclusions. This is much more than just thinking about interoperability to the broader commitment in this work.

Interesting enough, this too has been a central theme of our work at the Institute toward positively impacting and expanding the patient experience conversation. Namely that there are no secrets to patient experience as in similar vein there are none to technology as well. Yes, there are intricacies and challenges, but in our shared interest of realizing the best outcomes for all in the global healthcare system on either side of care delivery, our competition should not be on the knowledge, but our willingness to execute on this knowledge.

So too in our exploration did we see subtly in the comments of our diverse pool of contributors a common idea – that we must be in action on this topic if we are to move healthcare forward. Even as we brought together distinct voices from four corners of the conversation – from healthcare IT leaders to experience officers, resource providers and innovators to patient and family voices themselves – there was a common idea; that technology and patient experience are not disparate ideas. Rather we must recognize and work to ensure that as the world shifts around us, those of us in and/or influencing healthcare have an opportunity to lead. In linking patient experience and technology we are building a framework for better care, stronger encounters and ultimate excellence in experience in a world that in so far as we can hope to envision, so much is yet to be discovered. Perhaps the joy and possibility will be in our willingness to be on the journey itself.
Contributors

Paul Alexander Clark  
Founder, Chief Executive Officer  
Curate.Health

Inspired by his experience as a patient for 20 years recovering from a traumatic childhood accident, Paul founded Curate.Health to apply mobile technology to improve patient experience and strengthen patient-provider relationships. Prior to Curate.Health, Paul served as Vice President of Research & Education at The Health Management Academy leading a survey benchmarking research agenda and educational development for C-Suite executives of America’s leading health systems.

Previously, Paul originated the position and development of patient satisfaction improvement solutions as Director of Knowledge Management at Press Ganey Associates. He also managed the Internet presence for the American Association of Pharmaceutical Scientists and the launch of two leading peer-reviewed scientific journals.

Paul's extensive patient experience research includes two books, two book chapters, over a dozen peer-reviewed original research articles and hundreds of conferences. Paul serves on the editorial board of the Journal of Hospital Administration and the board of directors of the non-profit Bioethics International.

David Festenstein  
Managing Director  
Teleopen Ltd.

David is a communication specialist with 15 years training in Neuro-linguistic Programming, Coach and Professional Speaker who suffered a stroke in 2008 which left him paralyzed on his right side and unable to walk. He applied his communication training to drive his recovery process and made a remarkable recovery. David kept an extensive journal of his recovery process, which reflected his “Language of Recovery.”

David’s mission is to give back his gift of recovery by helping as many people as he can globally with his 7 steps to recovery model. David has become part of the Community User Engagement Team at The Centre for Innovation in Health Management at Leeds Business School, as well as being on the Executive Coaching Panel at Warwick Business School. David also released 7 Steps to Recovery app. The app consists of 28 short videos of 1-4 minutes duration where he serves as “a coach in their pocket” giving people specific techniques to help them feel better and to get them to a point where they can take action.

Sven Gierlinger  
Chief Experience Officer  
Northwell Health

Sven is passionate about building an emotionally engaging and innovative culture that drives growth and consumer loyalty through customer satisfaction. He has more than 20 years experience in the hospitality and service industry, including 8 years with The Ritz-Carlton Hotel Company.

As Chief Experience Officer for Northwell Health, Sven is responsible for building an engaging, innovative and collaborative culture that drives organizational growth and customer loyalty through the customer experience. Prior to this, he was Vice President of Hospitality and Service Culture at Henry Ford Health System and also played a critical role in the start-up and success of Henry Ford West Bloomfield Hospital.

Pam Guler, MHA, FACHE, CPXP  
VP, Chief Patient Experience Officer,  
Adventist Health System

Pam provides strategic mentorship to leadership teams throughout the organization on the best practices for improving and sustaining patient and family experience and engagement across the continuum of care. Pam leads the Adventist Health System strategies for providing a consistent exceptional experience at each touchpoint in the healthcare journey.

Pam has more than 25 years experience with a varied background in healthcare and business. The most recent 14 years have included progressive roles in healthcare, focused on patient experience and engagement, physician and team member engagement, hospital administration and performance improvement. Her early career experience in the business sector was focused in human resources, information systems and technology.

Pam is a certified Lean Six Sigma Master Black Belt with a strong background in leading teams in process improvement. She is also a Certified Patient Experience Professional and a Fellow of the American College of Healthcare Executives.
The Role of Technology in Patient Experience: Insights and Trends

Jolinda Lambert
Chief Executive Officer
Innovatient

Jolinda has built long-term strategic relationships throughout the healthcare industry. She brings over 15 years of management experience in healthcare and technology companies. Prior to establishing Innovatient, she was a Senior Product Architect for Eclipsys Corporation. During her tenure at Eclipsys, she worked with over 40 hospitals across North America and Singapore. Previous to Eclipsys, Jolinda held an Associate Director position with Banner Health Systems. She was responsible for Clinical Operations with a focus on quality improvement and community outreach programs to enhance the relationships between patients, nurses, and physicians.

Gautam Mahtani
Co-Founder
Customer Feedback Systems LP

Gautam is a Loyalty Strategist and Entrepreneur with businesses in the United States, Gibraltar and South East Asia. He is also the Co-Founder of Customer Feedback Systems LP, a global provider of technology-driven Customer Experience Programs for healthcare, financial institutions, retailers and other service-focused industries. Gautam is launching a new company in 2016 called Care Experience that will leverage the voice-of-the-patient as well as patient journey mapping to bridge the gap between the patient experience and clinical outcomes. His drive for helping organizations build deeper relationships with customers and patients has led him to become a Net Promoter Certified Associate, and his passion lies in integrating the voice-of-the-patient into organizational culture in order to empower teams to better serve.

Aaron Miri, MBA, CHCIO, FHIMSS
Chief Information Officer
Walnut Hill Medical Center

Aaron’s biggest responsibility is leading a high-performing team in a world-class, technological cutting edge healthcare organization. He is responsible for directing all efforts of the Information Services in the organization, including the Electronic Medical record and interfaced ancillary systems, all supporting technology, and support for those systems.

Aaron is a Certified Healthcare Chief Information Officer (CHCIO) through the College of Healthcare Information Management Executives (CHIME), a distinguished Fellow with the Health Information Management Systems Society (HIMSS), and he holds a Project Management Professional (PMP) with the Project Management Institute (PMI). Aaron is the current Chair of the HIMSS National Public Policy Committee and has been asked to serve as an expert advisor to the United States Senate Committee on Health, Education, Labor, and Pensions (HELP) and to other congressional panels engaged in numerous Health IT policy topics. He is serving as a member of the Office of the National Coordinator (ONC) FACA subcommittees and with the ONC Patient ID Matching group as a member hospital. He is also a member of the AT&T Healthcare Executive Board, the Imprivata Healthcare Advisory Board and is a mentor in the North Texas American College of Healthcare Executives (ACHE) chapter, and has been recognized as a 2015 and 2016 “CIOs to Know” by Beckers Hospital Review.

Michael O’Neil
Founder and CEO
GetWellNetwork®

Michael was diagnosed with non-Hodgkin’s lymphoma at the age of 28. After four cycles of chemotherapy, he started GetWellNetwork® to help hospitals improve performance and outcomes through patient engagement.

Today, GetWellNetwork is working with over 200 healthcare organizations incorporating its Interactive Patient Care™ model across the continuum of care. GetWellNetwork is recognized by KLAS® as the market leader in Interactive Patient Systems. The company has also been named to the Deloitte Technology Fast 500™ and Inc. 5000 lists as one of America’s fastest growing private companies.

Michael is a member of the Young Presidents’ Organization and Mindshare, a group of high-tech CEOs fostering entrepreneurship and growth throughout the nation’s capital. Michael also serves on the board of directors of The Leukemia & Lymphoma Society and the DAISY Foundation, a global organization dedicated to honoring nurses.

Michael A. Pfeffer, MD, FACP
Chief Information Officer
UCLA Health Sciences

In Michael’s role at UCLA Health Sciences, which is comprised of the UCLA Hospital System, the UCLA Faculty Practice Group, and the David Geffen School of Medicine, he is responsible for the development and operations of the information systems, the overall health IT strategic plan, and the implementation of transformative and
innovative technologies to further UCLA’s mission of healing humankind one patient at a time. With UCLA’s initial “Big-Bang” go-live in March 2013, Michael was the lead physician for UCLA’s electronic health record encompassing over 26,000 users.

Michael also serves as a core faculty member for the internal medicine residency program, focusing on information technology solutions for educating residents and improving transitions of care. In addition, he continues to practice as an academic hospitalist, working with residents and medical students in the care of patients.

Casey Quinlan
Author and Patient Advocate
Mighty Casey Media LLC

Casey covered her share of medical stories as a TV news field producer, then got a breast cancer diagnosis five days before Christmas in 2007. She used her research, communication, and comedy skills to navigate treatment, and wrote “Cancer for Christmas: Making the Most of a Daunting Gift” about managing medical care, and the importance of health literate self-advocacy. In addition to her ongoing work as a journalist, she’s also part of the My Ideal Patient Experience consulting group.

In 2013, Casey was invited to join the HealthIT.gov Consumer Empowerment Workgroup of the Health IT Policy Committee (HITPC), and she was named an ePatient Scholar to Stanford’s MedicineX in 2013. In 2014, she participated in the development of the Patient and Family Engagement Roadmap, was identified as a patient engagement expert by the WHO, and returned to MedX as a panel presenter on the PFE Roadmap project. In 2015, Casey was invited to present at HIMSS Patient Engagement Summit, HIMSS Privacy & Security Forum, and DellWorld 2015 as a patient voice on topics from trust in the clinical relationship to data security issues in medical record interoperability.

Tim Travis
President
TruthPoint

Prior to co-founding TruthPoint in 2007, Tim held various sales, marketing, product development and general management leadership positions with Vickers LTD, Hill-Rom and Universal Hospital Services. With a desire to achieve a more direct impact on the patient experience, Tim joined Vertical Systems, Inc., and co-founded TruthPoint with the purpose of positively impacting patient experience and staff engagement through the effective use of point-of-care, real-time patient feedback. As the TruthPoint team has grown, Tim now oversees the Performance Improvement Coaching team and continues to play an active role in educating the market on the benefits of TruthPoint Performance Improvement solutions.

Matthew Werder
Chief Technology Officer
Hennepin County Medical Center

In his role at at Hennepin County Medical Center, a 477-bed Level 1 Trauma Center and Academic Medical Center in Minneapolis, Matthew is responsible for executing HMC’s technology vision and strategy to enable the organization to achieve its critical priorities. Currently, Matthew is leading the development of an enterprise telemedicine strategy, designing the organization’s technology governance structure and defining the enterprise prioritization processes.

Prior to his role as CTO, Matthew was the Director of Supply Chain at HCMC, where over the course of 4 years achieved over $12M in cost savings while transforming the supply chain organization whom received recognition by Supply & Demand Chain Executive as Pros to Know in 2013 and 2014. He also worked as a Supply Chain Manager for Medtronic, Inc. at their Physiological Research Laboratories and in the Global Strategic Sourcing group. Matthew is a certified Lean instructor and previously worked as a Lean Consultant with Operational Excellence, Inc.

Matthew has presented and been published on several topics focusing on operational excellence, cost management, technology and the patient experience and strategic sourcing for services in healthcare.

Colleen Young
Community Director
Mayo Clinic Connect

Colleen (@colleen_young) is internationally recognized for her expertise in building online health communities that thrive. She’s the Community Director for Mayo Clinic Connect, a virtual community connecting patients with each other and to Mayo Clinic medical expertise. She’s also the Founder of Health Care Social Media Canada (#hcsmca) tweetchat.

In 2012, Colleen was awarded the Journal of Medical Internet Research Award at the Medicine 2.0 Congress at Harvard University for her leadership in developing best practices for building online communities. She frequently speaks and writes about chronic illness in the digital age and the impact of social web in health and healthcare, including presenting at Stanford Medicine X 2014 and 2015.
Also from The Beryl Institute

2015
The Critical Role of Spirituality in Patient Experience
Leadership and Sustaining Patient Experience Performance
State of Patient Experience 2015: A Global Perspective on the Patient Experience Movement
A Dialogue on Improving Patient Experience throughout the Continuum of Care
Patient Advocate: A Critical Role in Patient Experience
The Power of Person-Centeredness in Long-Term Care: A View Across the Continuum

2014
Defining Patient Experience: A Critical Decision for Healthcare Organizations
An Invisible Barrier to Compassionate Care: The Implications of Physician Burnout
The Power of Selection and the Use of Talent in Driving Exceptional PX
The Association between Patient Experience and Hospital Financial Performance
The Chief Experience Officer – An Emerging & Critical Role

2013
Voices of Measurement in Improving Patient Experience
Voices of Physician Practices and Medical Groups: Exploring the State of Patient Experience
Enhancing the Patient Experience through Live Entertainment
Voices of Patients and Families: Partners in Improving Patient Experience
Voices of Practice: Exploring the Patient Experience in Action - Highlights from On the Road with The Beryl Institute
Voices of the Future: Student Perspectives on the Patient Experience
Voices from the C-Suite: Perspectives on Patient Experience

2012
The Role of Organization Culture in a Positive Patient Experience: A Leadership Imperative
Patient Perspectives on Outstanding Experiences: The Impact of Emotionally Intelligent Staff
The Role and Perception of Privacy and its Influence on the Patient Experience
Structuring the Patient Experience Effort: An Inquiry of Effective Practice
Charting a Course to Quiet: Addressing the Challenge of Noise in Hospitals
Physician Perspectives on Patient Experience
Benchmarking the Patient Experience: Five Priorities for Improvement

2011
Return on Service: The Financial Impact of Patient Experience
Creating “PEAK” Patient Experiences
The Role of Cultural Competence in Delivering Positive Patient Experiences
The State of the Patient Experience in American Hospitals
The Revenue Cycle: An Essential Component in Improving Patient Experience
Enhancing the Patient Experience Through the Use of Interactive Technology

2010
Four Cornerstones of an Exceptional Patient Experience
Insights into the Patient Experience – Research Brief
Zeroing in on the Patient Experience: Views and Voices from the Frontlines
Perspectives on a Patient-Centered Environment